

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
6 May 2004 (06.05.2004)

PCT

(10) International Publication Number
WO 2004/038025 A2

(51) International Patent Classification⁷: C12N 15/31, (74) Agents: SGARBI, Renato et al.; Ing. A. Giambrocono & C07K 14/36, C12P 1/06 C. Srl, Via Rosolino Pilo, 19/B, I-20129 Milano (IT).

(21) International Application Number:
PCT/EP2003/011398

(22) International Filing Date: 15 October 2003 (15.10.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
02023597.4 23 October 2002 (23.10.2002) EP

(71) Applicant (for all designated States except US): VI-CURON PHARMACEUTICALS INC. [US/US]; 455 South Gulph Road, Ste. 305, King of Prussia, PA 1940 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): DONADIO, Stefano [IT/IT]; Via Cav. Brusa 43, I-21046 Malnate (IT). SOSIO, Margherita [IT/IT]; Via Montegrappa, 5, I-20020 Solaro (IT). BELTRAMETTI, Fabrizio [IT/IT]; Via Degli Aceri 8, I-20030 Seveso (IT).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2004/038025 A2

(54) Title: GENES AND PROTEINS FOR THE BIOSYNTHESIS OF THE GLYCOPEPTIDE ANTIBIOTIC A40926

(57) Abstract: The present invention relates to the field of antibiotics, and more specifically to the isolation of nucleic acid molecules that code for the biosynthetic pathway of the glycopeptide antibiotic A40926. Disclosed are the functions of the gene products involved in A40926 production. The present invention provides novel biosynthetic genes that code for A40926 production, the encoded polypeptides, the recombinant vectors comprising the nucleic acid sequences that encode said polypeptides, the host cells transformed with said vectors and methods for producing glycopeptide antibiotics using said transformed host cells, including methods for producing A40926, a precursor thereof, a derivative thereof or a modified glycopeptide different from A 40926 or a precursor thereof.